

The Mediating Effect of Consumers' Purchase Intention: A Perspective of Online Shopping Behavior among Generation Y

Lim Yi Jin

College of Business, Universiti Utara Malaysia, 06010 Sintok, Kedah, Malaysia

Abdullah Osman

Kulliyyah Muamalat, Insaniah University College, 09300 Kuala Ketil, Kedah, Malaysia

Arman Hadi Abdul Manaf *

Faculty of Business Administration, Kanagawa University, Hiratsuka-City 259-1293, Kanagawa, Japan

Muhammad Safizal Abdullah

School of Business, Innovation and Technopreneurship, Universiti Malaysia Perlis, 01000 Kangar, Perlis, Malaysia

Abstract

Young consumers spend most of their time online in comparison to the working adults due to their great potential of buying power as well finding that online shopping is more convenient. The objective of this study is to investigate factors determining online purchase intention among the university students whereby variables such as attitude, subjective norm, trust, purchase intention and behavior were tested. Total of 800 questionnaires were distributed and 662 questionnaires were usable. A quantitative research was undertaken through the distribution of survey questionnaires and the data were analyzed using Structural Equation Modelling (SEM) to test the relations among variables. The analyses have proven that purchase intention has functioned effectively as a mediator between the independent variables (attitude, subjective norm and trust) and dependent variables (online shopping behavior). The results of this study offer some new frontiers in supporting as well as enriching more studies in the scope of online shopping behaviors. This study contributes to the dynamics of the causative relations between examined variables and highlights the significance of attitude, subjective norm, trust and consumer behavior in ascertaining the purchase intention in the context of Malaysian online purchases.

Keywords: Purchase intention, Attitude, Subjective norm, Trust, Consumer behavior

1. Introduction

1.1 Internet Purchasing Scenario in Malaysia

Internet is not a peculiar tool in this millennium world. Businesses preferred the internet for internal communication among the colleagues in linking departments to fully optimize the efficiency and effectiveness in organization performance as well as linking with their business counterparts around the globe (Thatcher et al., 2007). The government bodies utilize the internet in providing information and services to the general public and to internally communicate between the government departments. Schools or universities used the internet to search for the up-to-date teaching materials and references to enhance students' academic performance and as for the public, internet is a credible source of inquiries, social networking as well as to purchase goods as a craving for stress mitigation (Gregoire, 2013).

In relation to this, internet shopping adoption by consumers is still in its pre mature stage in Malaysia (Khatibi et al., 2006; Zamri and Idris, 2013) even though the e-commerce promotional activities were introduced to the Malaysia consumers. For instance, the government has set up a tele-center to provide opportunities for local community to learn new skills through Internet and it was expected to contribute to e-commerce in the future (Economic Planning Unit, 2010) while private sectors such as Tesco and Guardian have also launched an e-store to serve better and greater convenience to their customers within Malaysia (The Star, 2014, March 25). However, Malaysians seemed reluctant to opt for the online purchasing goods or services (Syed and Norjaya, 2010; Tan et al., 2010) as their shopping platform instead prefer the traditional way of shopping (Ramayah and Ignatius,

2005).

Neilsen (2008) stated that 55 per cent of Malaysian consumers claimed that they do not prefer to purchase online and to provide their payment details even though the information confidentiality is guaranteed by the retailers. A study by Salehi (2012) showed that one important factor in electronic commerce is trust and customers are skeptical that their personal information will be trespassed by others.

1.2 Research Objectives

Based on the necessity of this study, the objectives have been set as follows:

- a. To examine the influence of consumers' attitude on their online shopping behavior;
- b. To examine the influence of the subjective norm on the online shopping behavior;
- c. To examine the influence of consumers' trust on the online shopping behavior;
- d. To test whether the consumers' purchase intention mediates the relationship between attitudes, subjective norm, trust and the online shopping behavior.

1.3 Research Questions

The following research questions were developed as follows:

- a. Does the consumers' attitude significantly determine on the online shopping behavior?
- b. Does the subjective norm significantly determine on the online shopping behavior?
- c. Does the consumers' trust significantly determine on the online shopping?
- d. Does the consumers' purchase intention mediates the relationship between consumers' attitude, trust, subjective norm and online shopping behavior?

1.4 The Hypotheses

Hypotheses are referred to the expression of conjectured logical relationship between two or more variables in a formal statement, which can be tested. Therefore, in this study the hypotheses address and reflect on the research questions as follows:

H_{a1} Attitude has positive influence on the online shopping behavior

H_{a2} Subjective norm has negative influence on the online shopping behavior

H_{a3} Trust has positive influence on the online shopping behavior

H_{a4} Purchase Intention has positive influence on the online shopping behavior

H_{a5} Consumer purchase intention does function as mediator between attitude, subjective norm, trust and online shopping behavior

2. Literature Review

2.1 Generation Y and Online Shopping

Generation Y constitutes for about 11 million in 2010 which comprised of 40% of total population in Malaysia (Department of Statistics Malaysia, 2013). In Malaysia, most of the online shoppers were constituted by Generation Y. It was undoubted as in the online shopping context, there are several researches indicated that young adults ranging between 20 and 30 years have internet experience than the 40 years old and above (Aghdaie et al., 2011; Hasan and Rahim, 2008; Norazah and Norbayah, 2013; Raman and Annamalai, 2011). According to comScore (2004), young adults aged 18 to 34 (72 per cent) are persistently surfing internet than other age groups reported by Online Publishers Association (OPA). In recent year, university students have fascinated the marketers to study on them as they are among the Generation Y which is educated and tech-savvy (Valentine and Powers, 2013).

2.1 Purchase Intention

Purchase intention is defined as one's planning make purchases of goods or services in the future (Limbu et al., 2012). This refers to a repetition of purchases and there's higher probability of return back among consumers to the same goods or services. This particular subject has attracted most of the policy makers and business organizations in identifying the most influencing factors upon purchase intention to a group of consumers as well as forecasting on consumers' preferences (Fon et al., 2008).

Purchase intention can be influenced by perceived ease of use (Gong et al., 2013; Heijden et al., 2003; Roca et al., 2009; Kim and Song, 2010; Yusniza, 2007), perceived usefulness (Gong et al., 2013; He et al., 2008; Lai and Wang, 2012; Xie et al., 2011; Yuliharsi et al., 2011), perceived risk (Hidayanto et al., 2012; Gong et al., 2013; Heijden et al., 2003; Hu et al., 2009; Lai and Wang, 2012), trust and reliability (Hsu et al., 2013; Jiang et al., 2008; Lee et al., 2014; Lai and Wang, 2012; Alam and Sayuti, 2011), attitude (Liu et al., 2010; Limayem et al., 2000; Orapin, 2009; Tsen et al., 2011; Wu et al., 2014) and subjective norm (Xie et al., 2011). Chen and Zimitat (2006) and Heijden et al. (2003) recommended that future research should focus broader contexts particularly the actual consumer behaviour.

2.2 Attitude

Wu et al. (2014) stated that attitude as a psychological inclination which expressed by accessing a particular entity with some degree of favour or disfavor and it is built through affective, cognitive and behavioral appraisal. Attitude is the positive or negative cognitive evaluation, emotional feeling and behavioral tendency held by customers during transaction (Lai and Wang, 2012; Perner, 2008). It influences customers' judgment and evaluation during transaction and it would affect the perception towards one retailer.

In Malaysia, Husin and Rahman (2013) suggested that attitude is positively influence intention to participate in family *takaful* scheme. Noor et al. (2014) also suggested that attitude is positively influence on the consumption of dietary supplements; while Zhao and Othman (2011) also found that consumers with more favorable attitude towards complaining will be more likely to have complaint intention. In addition, two researches used students as the respondents (i.e. Noor et al., 2014; Phau et al., 2014) while others used general public as the respondents (i.e. Chen and Zimitat, 2006; Diallo et al., 2013; Hidayanto et al., 2012; Hsu et al., 2013; Husin and Rahman, 2013; Li et al., 2013; Petruzzellis, 2010; Zhao and Othman, 2011).

Further, in the context of online shopping, researchers such as Hsu et al. (2013) and Hidayanto et al. (2012) indicated that most of the sample have been chosen are young consumers since most of them are frequently used internet shopping compared to the older users. A study by Hsu et al. (2013) concludes that the internet users aged between 25 to 35 years had accounted for 97 percent compared to only 3 percent for internet users aged 36 above.

2.3 Subjective Norm

According to Ajzen (1991), subjective norm is defined as the perceived social pressure to perform or not to perform the behavior. Social pressure can influence one's behavior in different ways in different societies (Husin and Rahman, 2013). Subjective norm can be gauged from standpoints about other's normative expectations and motivation to comply with these expectations (Orapin, 2009).

Ajzen (1991) suggested that normative beliefs are viewed as determining subjective norms, further consumers will be influenced by public opinions and the expectations from specific groups (Xie et al., 2011). Previous researches have proven that subjective norm has significant influence on purchase intention (Al-Maghrabi et al., 2011; Limayem et al., 2000; Orapin, 2009; Park, 2013). In contrast, Taylor and Todd (1995) and Tseng et al. (2011) demonstrated that subjective norm has no significant effect on internet purchase intention.

According to Tseng et al. (2011), subjective norm does not play an important role when internet shopping is still in the initial stage of adoption. A study supported this finding since there are lack of enough references from prior adopters such as friends, peers and superiors in an adoption stage, and thus it was reasonable that subjective norm is insignificant with purchase intention (Chen, 2006).

Further, Husin and Rahman (2013) stated that consumers' decision making will be influenced by family members, friends, religious teachers and mass media such as newspapers, televisions, magazines. In Malaysia for instance, subjective norm does influence on the intention to participate in family *takaful* (insurance) scheme (Husin and Rahman, 2013), further it also influences on the innovativeness of the infused of soft drinks as well

as upon the online shopping intention (David et al., 2012).

2.4 Trust

Trust is an assured reliance whereby both the trustor and trustee will try to satisfy each other in developing a strong bonding between them (Limbu et al., 2012). To the online consumers, trust was built in a person-to-website manner rather than person-to-person communication, transmitted through technology (Corritore et al., 2003; Winch and Joyce, 2006).

Wei et al. (2010) stated that most of the consumers were questioning on the integrity of the vendors during the pre and post-sale service, merchant authentication and non-repudiation of defective product. In addition to this, the privacy protection, accuracy to declaration and unauthorized access also lead to distrust behavior (Tseng et al., 2011). The interpretation in accuracy of information that is presented by the underlying information systems may influence customers' trust.

Therefore, building trust in customers' perception influenced the online shopping intention and the customers are willing to accept any potentially negative effects or loss caused by embracing online shopping (Lai and Wang, 2012). The potential or actual customers always have trust inclination toward online shopping based on brands, customers' testimonials, customer services and actual online shopping experiences.

2.5 Consumer Behavior

Consumer behavior occurs either for the individual, group or an organization that involved services and ideas as well tangible products (Sharma, 2006). It may happen in various thoughtless situations (Banyte and Raisyte, 2009; Kardes et al., 2010). People engage in consumer behavior when their purchase decision ended to brand and what they have purchased in last few days (Perner, 2008). People will always consider when to purchase and what impression toward the products (Saylor.org, 2013).

According to Kardes et al. (2010), even if customer did not actually making purchase, customer will probably exposed to marketing information in the form of advertisement, product information on packages, opinions from friends or family members and brand symbols on almost everything.

Customer behavior comprises of all consumer activities from purchase, use and disposal of goods and services which associated with the consumer's emotional, mental and behavioral responses that precede, determine or follow these activities (Kardes et al., 2010; Perner, 2008) and it is a very complex knowledge to study from because different consumers may have different response to one product (Saylor.org, 2013). It is important to study consumer behavior that able to understand what the consumers think, feel and want from the products (Perner, 2008; Babu et al., 2010). A related study by He et al. (2008) suggested that future study should study on the actual online shopping behavior.

2.6 Theory of Planned behavior (TPB)

Ajzen and Fishbein (1980) proposed a new extension theory from Theory of Reasoned Action (TRA) which is the Theory of Planned Behavior (TPB) due to the former that exhibited voluntary behavior and the latter was revamped into better theory that the behavior is not completely under control. Many researchers utilized Theory of Planned Behavior which proposed by Ajzen (1985, 1991) to support their research studies (Alam and Sayuti, 2011; Chen and Zimitat, 2006; Hidayanto et al., 2012; Huang et al., 2011; Limayem et al., 2000; Orapin, 2009; Phau et al., 2013; Tseng et al., 2011; Zhao and Othman, 2011). According to Ajzen (1991), Theory of Planned Behavior (TPB) is not perfect as there are still many issues that remain unsolved and it needs improvement to this theory.

Based on Theory of Planned Behavior (TPB), attitude, subjective norms and perceived behavioral control together with intention will influence the actual behavior. Hidayanto et al. (2012) applied two of the independent variables (attitude and perceived behavioral control) proposed by Ajzen (1991) to support their research and the results showed that both attitude and perceived behavioral control have positive relationship with online purchase intention. Some significant drawbacks in this study since this study occupied low sample size, the study was conducted in Indonesia and could not reflect same findings in other geographical areas. A related study on TPB was conducted in Thailand to explain purchase intention towards online shopping (Orapin, 2009) and result showed that customer's attitude, subjective norm and perceived behavioral control affect intention to shop online. Although there are positive relationships between variables, the possibility of the results discrepancy

might emerge due to cultural differences.

2.7 Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) is the adaption model from Theory of Reasoned Action (TRA). The first TAM was utilized to test user's computer acceptance and was dealing with three antecedents (attitude, perceived usefulness and perceived ease of use) toward influencing computer usage intention (Davis et al., 1989).

However, due to attitude did not have much impact on intention to used, TAM 2 was then proposed with the attitude removed from the model. Trust has been proven to having significant relationship with TAM and being utilized in most of the online shopping context (Heijden et al., 2003; Kim and Song, 2010; Lai and Wang, 2012; Roca et al., 2009). Davis (1989) and Wu and Chen (2005) posited that perceived usefulness on the website relies on the level of trust in online website.

To date, many literatures showed that trust is an important requirement to predict online shopping behavior (Hsu et al., 2013; Jiang et al. 2008; Limbu et al., 2012; Mukherjee and Nath, 2007; Nor et al., 2010). Gefen et al. (2003) stated that an integrated trust and TAM found that trust will antecede and increase perceived usefulness towards a website. The reason is that usefulness of the website can be perceived through the owner behind the webstore that subsequently precede online purchase intention (Wu and Chen, 2005). Furthermore, the evidence regarding perceived ease of use remains inconsistent since with more experience in internet usage, the influence of perceived ease of use on intention decreases (Al-Maghrabi et al., 2011).

3. Methodology

Theory of Planned Behavior (TPB) is a central of this study as it is widely used in previous studies to interpret and explain the user's behavioral action in the online shopping environment (Zhou et al., 2007). However, in fulfilling the objective of this study, perceived behavioral control in TPB was omitted and replaced with trust as it is a vital determinant on the customers' control over online transaction (Tseng et al., 2011).

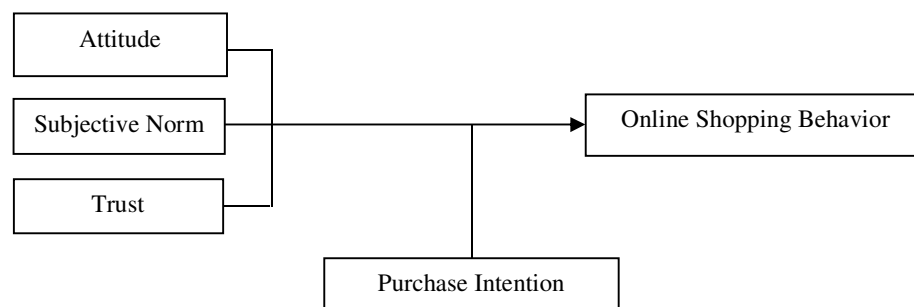


Figure 1: Research Framework

Figure 1, represents the framework of studies whereby it represents the selected variables which are to be tested. A quantitative research was utilized in this study survey questionnaires were distributed among the public university students in Malaysia. The questionnaires consisted of close-ended questions that allow for easy selection. Total of 800 questionnaires were distributed and 662 questionnaires were usable. The SPSS version 18.0 utilized to explain the frequency, reliability and descriptive analyses while Analysis for Moment Structures (AMOS) was used for Structural Equation Modelling (SEM) analysis.

4. Analysis and Findings

4.1 Reliability Test

As shown in Table 1, all measurements resulted in high reliabilities with Cronbach's Alpha ranging from 0.846 to 0.961. The figures have fulfilled the acceptable value of > 0.70 as suggested by Lehman (2005); Nunnally (1978); and Wells and Wollack (2003). No items that had been deleted since all items in the questionnaires were

scored > 0.80.

Table 1. Reliability analysis

<i>No</i>	<i>Study Variables</i>	<i>No. of Item</i>	<i>Cronbach's Alpha</i>	<i>Remarks</i>
1	Online Shopping Behavior	3	0.961	Excellent
2	Online Purchase Intention	7	0.923	Excellent
3	Attitude	9	0.898	Good
4	Subjective Norm	7	0.846	Good
5	Trust	7	0.942	Excellent

Since the value for online shopping behavior was 0.961 and the highest among other variables as shown in Table 1, it was considered as the best indicators among other variables while subjective norm context with Cronbach's Alpha value of 0.846 somehow indicated that some of the items were rather fluctuate and being inconsistent along the measures since it was adapted from four different authors (Ajzen 2006; Limayem et al., 2000; Shih and Fang, 2004; Taylor and Todd, 1995).

4.2 Descriptive Analysis

Descriptive analyses were performed on all variables of online shopping behavior, online purchase intention, attitude, subjective norm and trust as illustrated in Table 2. The mean score for online shopping behavior (dependent variable), online purchase intention (mediating variable) and the independent variables of attitude, subjective norm and trust are ranging between the values of 3.00 to 5.00.

Table 2. Descriptive analysis

<i>Variables</i>	<i>N</i>	<i>Min.</i>	<i>Max.</i>	<i>Mean</i>	<i>Standard Deviation</i>
Online Shopping Behavior	662	1.00	7.00	3.15	1.65
Online Purchase Intention	662	1.00	7.00	3.84	1.45
Attitude	662	1.00	7.00	4.34	1.21
Subjective Norm	662	1.00	7.00	4.06	1.09
Trust	662	1.00	7.00	4.01	1.22

Table 2 indicated the lowest mean score of 3.15 indicated that the respondents averagely supported or neither agree or disagree specifically to university students' online shopping behavior. Based on the analysis, the standard deviation for every variable fell between the range of 1.09 and 1.65 reflected that the existence of considerably acceptable variability within the data set. The results demonstrated that every studied variable had different responses from the respondents, thus implied the existence of acceptable changes in responses.

4.3 Empirical Test of Hypothesized Model

Figure 2, exhibits the goodness of fit indexes of the model was fit well as only the GFI did not met the requirement of more than 0.9. A revised model was conducted to make some improvement based on the standardized residuals, modification index (M1), and insignificant paths (Schumacker and Lomax, 2004).

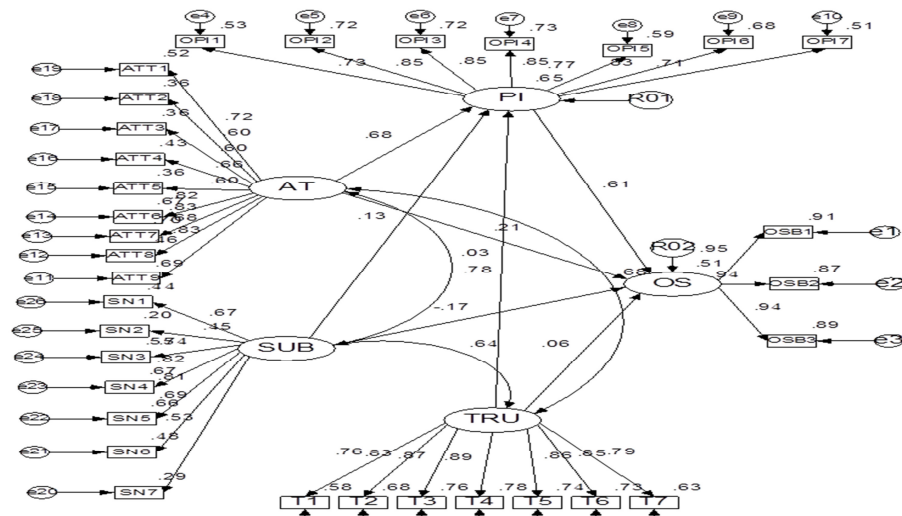


Figure 2: Goodness of Fit Indexes

On the other hand, Figure 3 demonstrates on the revised model after deletion of several items as follows:

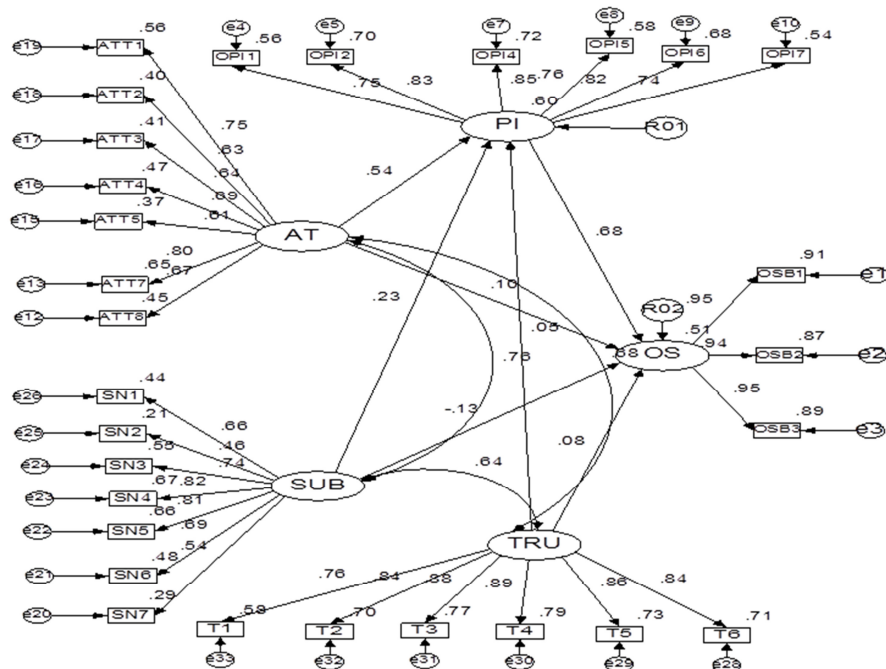


Figure 3: Revised Model

The revised model output illustrated in Figure 3 shows that the model has explained the large portion of variance in the endogenous variables.

Table 3. Improvement in Goodness-of-Fit of hypothesized and revised Model

<i>Model</i>	<i>Items</i>	<i>GFI</i>	<i>RMSEA</i>	<i>CFI</i>	<i>χ^2/DF</i>	<i>TLI</i>
1. Original Model	33	0.874	0.057	0.938	3.119	0.932
2. Revised Model	29	0.902	0.052	0.952	2.768	0.947

Table 3 represents on the differences between the original hypothesized model and hypothesized model after revised. The revised model indicated an overall good fit after 4 items have beendeleted. The model has met all requirements of the goodness-of-fit measurement whereby the GFI was 0.902 (>0.90) displayed good or acceptable (Hu and Bentler, 1999), RMSEA value of 0.05 (≥ 0.05) (Schumacker and Lomax, 2004), CFI value of 0.952 (>0.95), χ^2/DF value of 2.768 (<2 or <3) (Carmin and McIver, 1981) and TLI value of 0.947 (close to 0.95) was deemed as a good fit.

Table 4. Endogenous variables

<i>Endogenous Variable</i>	<i>Square Multiple Correlation (R^2)</i>
Online shopping behavior	0.507
Online purchase intention	0.599

As depicted in Table 4, that the three exogenous variables and the mediator jointly explained 50.7% variance in online shopping behavior and 59.9% of variance in online purchase intention.

4.4 Direct Effect Test

Table 5, demonstrates on direct effect of exogenous and endogenous variables.

Table 5. Exogenous and Endogenous variables

<i>H</i>	<i>Variables</i>	<i>Path</i>	<i>Endogenous</i>	<i>Direct Effect</i>
H _{a1}	Attitude	→	Online Shopping behavior	0.097
H _{a2}	Subjective norm	→	Online Shopping behavior	-0.134
H _{a3}	Trust	→	Online Shopping behavior	0.077
H ₁	Attitude	→	Online Purchase Intention	0.544
H ₂	Subjective norm	→	Online Purchase Intention	0.234
H ₃	Trust	→	Online Purchase Intention	0.050
H ₄	Purchase intention	→	Online Shopping behavior	0.680

Based on Table 5, attitude and trust represent relatively low direct effect on online shopping behavior. Further, the direct effect of subjective norm on online shopping behavior indicated low direct negative relationship. Attitude was the exogenous variable that possessed the highest direct effect on online shopping intention however the subjective norm and trust indicate relatively low influence on online shopping intention. Purchase intention had strong relationship with online shopping behavior. Therefore, purchase intention has proven to function well as a mediator between the independent variables (attitude, subjective norm and trust) and dependent variables (online shopping behavior).

5. Discussion and Conclusion

This study is undertaken with the objective of the contribution concerning on the selected variables namely; purchase intention, trust, subjective norm and attitude correlated with online purchase behavior among the universities students. This study offers some new frontiers in supporting as well as enriching more studies in the scope of online shopping behaviors. Future research could use the platform of this study to target on specific

group such as on gender, age, and education level in order to design the future pattern of e-commerce. The results of our study indicated that attitude and trust have positively influence online shopping behavior. When attitude and trust level increased, online shopping intention and behavior were also increased respectively. There is a low positive relationship between subjective norm and online shopping intention; however the effect of subjective norm towards online shopping behavior showed a negative relationship through the surveys. In other words, the university students have a positive attitude and trust level towards online shopping adoption whereby the subjective norm (i.e. families, friends, and the media) indicates less influence towards online shopping intention.

References

- Aghdaie, S. F., Piraman, A. & Fathi, S. (2011). An Analysis of Factors Affecting the Consumer's Attitude of Trust and their Impact on Internet Purchasing Behaviour. *International Journal of Business and Social Science*, 2 (23), pp. 147-158.
- Ajzen, I. (1985). *From Intentions to Actions: A Theory of Planned Behavior*. In Kuhl, J & Beckman, J. (ed.) *Action Control: From Cognition to Behaviour*. Heidelberg: Springer.
- Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50 (2), pp. 179 - 211.
- Ajzen, I. (2006). Constructing A Theory of Planned Behaviour Questionnaire: Available at <http://people.umass.edu/aizen/pdf/tpb.measurement.pdf>
- Ajzen, I. & Fishbein, M. (1980). *Understanding Attitudes and Predicting Social Behavior*. Englewood Cliffs, NJ: Prentice Hall.
- Alam, S. S. & Sayuti, N. M. (2011). Applying the Theory of Planned Behavior (TPB) in Halal Food Purchasing. *International Journal of Commerce and Management*, 21 (1), pp. 8-20.
- Al-Maghrabi, T., Dennis, C., Halliday, S. V. & Ali, A. (2011). Antecedents of Continuance Intentions Toward e-Shopping: The Case of Saudi Arabia. *Journal of Enterprise Information Management*, 24 (1), pp. 85-111.
- Babu, G. M., Panchanathan, N. & Vani, G. (2010). Toothpaste Brands - A Study of Consumer Behavior on Bangalore City. *Journal of Economics and Behavioral Studies*, 1 (1), pp. 27-39.
- Banyte, J. & Raisyte, V. (2009). *Global Financial Crisis: Reasons, Effects and Solutions*. Stockholm School of Economics in Riga, Izmir.
- Carmines, E.G. & McIver, J.P. (1981). *Analyzing Models with Unobserved Variables: Analysis of Covariance Structures*. In G. W. Bohrnstedt & E.F. Borgatta (Eds.), *Social Measurement: Current Issues*, Beverly Hills, CA: Sage.
- Chen, C. H. & Zimitat, C. (2006). Understanding Taiwanese Students' Decision-making Factors regarding Australian International Higher Education. *International Journal of Educational Management*, 20 (2), pp. 91-100.
- Chen, J. L. (2006). *A Study for Individual and Organizational Impact of IT Resources*. Chiayi: National Chung Cheng University.
- Choo, H., Chung, J. E., & Pysarchik, D. T. (2004). Antecedents to New Food Product Purchasing Behavior Among Innovator Groups in India. *European Journal of Marketing*, 38 (5/6), pp. 608 - 625.
- comScore. (2004, March). Marketers Take Note: The Elusive 18-34 Year-Old is Habitually Online: Available at <http://www.comscore.com/Insights/Press-Releases/2004/03/18-34-Year-Olds-Are-Habitually-Online>
- Corritore, C. L., Kracher, B. & Wiedenbeck, S. (2003). On-line Trust: Concepts, Evolving Themes: A Model. *International Journal of Human-Computer Studies*, 58 (6), pp. 737-758.
- Crespo, A. H. & Rodriguez, I. A. (2008). Explaining B2C e-commerce acceptance: An integrative model based on the framework by Gatignon and Robertson. *Journal of Interacting with Computers*, 20 (2), pp. 212-224.
- David, Y. K., Tong, X. F. & Yin, E. (2012). Young Consumers' Views of Infused Soft Drinks Innovation. *Young Consumers*, 13 (4), pp. 392-406.
- Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use and User Acceptance of Information Technology. 13 (3), pp. 319-340.
- Davis, F. D., Bagozzi, R. P. & Warshaw, P. R. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Management Science*, 35 (8), pp. 982-1003.
- Department of Statistics Malaysia. (2013). Current Population Estimate. Putrajaya: Department of Statistics Malaysia:

- Available at <http://pqi.stats.gov.my>
- Diallo, M. F., Chandon, J. L., Cliquet, G. & Philippe, J. (2013). Factors Influencing Consumer Behaviour Towards Store Brands: Evidence from the French Market. *International Journal of Retail & Distribution Management*, 41 (6), pp. 422-441.
- Economic Planning Unit. (2010). Tenth Malaysia Plan 2011-2015, Economic Planning Unit: Available at http://www.epu.gov.my/epu-theme/RMKE10/rmke10_english.html
- Fon, S. O. J., Philip, K., & Ata, T. J. (2008). Consumption patterns and silver marketing: an analysis of older consumers in Malaysia. *Marketing Intelligence & Planning*, 26 (7), pp. 682-698.
- Gefen, D., Karahanna, E. & Straub, D.W. (2003). Trust and TAM in Online Shopping: An Integrated Model. *MIS Quarterly*, 27 (1), pp. 51-90.
- Gregoire, C. (2013). Retail Therapy: One in Three Recently Stressed Americans Shops To Deal With Anxiety, The Huffington Post: Available at http://www.huffingtonpost.com/2013/05/23/retail-therapy-shopping_n_3324972.html
- Hasan, H. H. & Rahim, S. (2008). Factors Affecting Online Purchasing Behavior. *Jurnal Komunikasi*, 24, pp. 1-19.
- Haque, A. & Khatibi, A. (2006). The Study of the Behavior of Malaysian Consumers Towards Online Shopping. *Asian Journal of Information Technology*, 5 (1), pp. 12-19.
- He, D., Lu, Y. & Zhou, D. (2008). Empirical Study of Consumers' Purchase Intentions in C2C Electronic Commerce. *Tsinghua Science & Technology*, 13 (3), pp. 287-292.
- Heijden, H. V., Verhagen, T. & Creemers, M. (2003). Understanding Online Purchase Intentions: Contribution from Technology and Trust Perspectives. *European Journal of Information Systems*, 12, pp. 41-48.
- Hidayanto, A. N., Saifulhaq, H. & Handayani, P. W. (2012). Do Consumers Really Care on Risks in Online Shopping? An Analysis from Indonesian Online Consumers. *IEEE ICMIT Conference*, (pp. 331-336).
- Hsu, C. L., Lin, J. C. C. & Chiang, H. S. (2013). The Effect of Blogger Recommendations on Customers' Online Shopping Intention. *Internet Research*, 23(1), pp. 69-88.
- Hu, L. T. & Bentler, P. M. (1999). Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria versus New Alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6 (1), pp. 1-55.
- Hu, Y., Sun, X., Jing, Z., Zhang, X., Luo, F. & Huang, L. (2009). A University Student Behavioral Intention Model of Online Shopping Based on TAM. *International Conference on Information Management, Innovation Management and Industrial Engineering* (pp. 625-628). IEEE Computer Society.
- Huang, Y. C., Wu, Y. C. J., Wang, Y. C. & Christopher, N. B. (2011). Decision Making in Online Auctions. *Management Decision*, 49 (5), pp. 784-800.
- Husin, M. M. & Rahman, A. A. (2013). What Drives Consumers to Participate into Family Takaful Schemes? A Literature Review. *Journal of Islamic Marketing*, 4 (3), pp. 264-280.
- Jamil, N. A. & Mat, N. K. (2011). To Investigate The Drivers of Online Purchasing Behavioral In Malaysia Based on the Theory of Planned Behavior (TPB): A Structural Equation Modeling (SEM) Approach. *International Conference On Management*, (pp. 453-460).
- Jiang, J. C., Chen, C. A. & Wang, C. C. (2008). Knowledge and Trust in E-Consumers' Online Shopping Behavior. *International Symposium on electronic Commerce and Security* (pp. 652-656). IEEE Computer Society.
- Kardes, F., Cronley, M. & Cline, T. (2010). *Consumer Behavior*. Mason: South-Western Cengage Learning.
- Khatibi, A., Haque, A. & Karim, K. (2006). E-commerce: A Study on Internet Shopping in Malaysia. *Journal of Applied Sciences*, 6 (3), pp. 696-705.
- Kim, H. & Song, J. (2010). The Quality of Word-of Mouth in the Online Shopping Mall. *Journal of Research in Interactive Marketing*, 4 (4), pp. 376-390.
- Lai, E. & Wang, Z. (2012). An Empirical Research on Factors Affecting Customer Purchasing Behavior Tendency during Online Shopping. (pp. 583-586). Institute of Electrical and Electronics Engineers.
- Lee, H. S., Khong, K. W. & Hong, J. L. (2014). Influence of Online Shopping Enjoyment and Trust towards Purchase Intention in Social Commerce Sites. *International Conference of Emerging Trends in Scientific Research* (pp. 355-362). Klang: Pak Publishing Group.
- Lehman, A. (2005). *JMP for Basic Univariate and Multivariate Statistics: A Step-by-step Guide*. SAS Institute.

- Li, N., Robson, A. & Coates, N. (2013). Chinese Consumers' Purchasing: Impact of Value and Affect. *Journal of Fashion Marketing and Management*, 17 (4), pp. 486-508.
- Limayem, M., Khalifa, M. & Frini, A. (2000). What Makes Consumers Buy from Internet? A Longitudinal Study of Online Shopping. *Systems, Man and Cybernetics*, 30 (4), pp. 421-432.
- Limbu, Y. B., Wolf, M. & Lunsford, D. (2012). Perceived Ethics of Online Retailers and Consumer Behavioral Intentions: The Mediating Roles of Trust and Attitude. *Journal of Research in Interactive Marketing*, 6 (2), pp. 133-154.
- Liu, Y., Chen, Y. & Zhou, C. F. (2010). Determinants of Customer Purchase Intention in Electronic Service. e-Business and Information System Security (EBISS), 2nd International Conference, 11357113, IEEE. <http://dx.doi.org/10.1109/EBISS.2010.5473602>.
- Malaysian Communications and Multimedia Commission. (2012). Annual Report 2012. Cyberjaya: Malaysian Communications and Multimedia Commission: Available at <http://www.skmm.gov.my/>
- Mukherjee, A. & Nath, P. (2007). Role of Electronic Trust in Online Retailing: A Re-Examination of The Commitment-Trust Theory. *European Journal of Marketing*, 41 (9/10), pp. 1173-1202.
- Nielson, A. C. (2008). World statistics on the number of internet shoppers: Available at <http://www.multilingual-search.com/world-statistics-on-the-number-of-internet-shoppers/28/01/2008>
- Noor, N. A., Yap, S. F., Liew, K. H. & Rajah, E. (2014). Consumer Attitudes toward Dietary Supplements Consumption: Implications for Pharmaceutical Marketing. *International Journal of Pharmaceutical and Healthcare Marketing*, 8 (1), pp. 6-26.
- Nor, K. M., Sutanonpaiboon, J. & Mastor, N. H. (2010). Malay, Chinese, and Internet Banking. *Chinese Management Studies*, 4 (2), pp. 141-153.
- Norazah, S. M. & Norbayah, S. M. (2013). *Examining Factors Correlated with Consumer Online Shopping Behaviour*. Macau: Springer Berlin Heidelberg, pp.133-141.
- Nunnally, J. C. (1978). *Psychometric Theory*. Michigan: McGraw-Hill.
- Orapin, L. (2009). Factors Influencing Internet Shopping Behavior: A Survey of Consumers in Thailand. *Journal of Fashion Marketing and Management*, 13 (4), pp. 501-513.
- Park, E. (2013). The Adoption of Tele-Presence Systems: Factors Affecting Intention to Use Tele-Presence Systems. *Kybernetes*, 42 (6), pp. 869-887.
- Perner, L. (2008). Consumer Behavior: The Psychology of Marketing, Consumer Psychologist: Available at <http://www.consumerpsychologist.com/index.html>
- Petrzellis, L. (2010). Mobile Phone Choice: Technology versus Marketing. The Brand Effect in The Italian Market. *European Journal of Marketing*, 44 (5), pp. 610-634.
- Phau, I., Lim, A., Liang, J. & Lwin, M. (2014). Engaging in Digital Piracy of Movies: A Theory of Planned Behaviour Approach. *Internet Research*, 24 (2), pp. 246-266.
- Pitchford, L. (2012). Shopping Cart Abandonment: 7 Simple Steps to Completing, The Sale Marketing Experiments: Available at <http://www.marketingexperiments.com/blog/research-topics/ecommerce/recover-shopping-cart-abandonment.html>.
- Raman, A., & Annamalai, V. (2011). Web Services and e-Shopping Decision: A Study on Malaysian e-Consumer. *Wireless Information Networks & Business Information System*, 2 (5), pp. 54-60.
- Ramayah, T. & Ignatius, J. (2005). Impact of Perceived Usefulness, Perceived Ease of Use and Perceived Enjoyment on Intention to Shop Online. *ICFAI Journal of Systems Management*, 3 (3), pp. 36-51.
- Roca, J. C., Garcia, J. J. & Vega, J. D. (2009). The Importance of Perceived Trust, Security and Privacy in Online Trading Systems. *Information Management and Computer Security*, 17 (2), pp. 96-113.
- Salehi, M. (2012). Consumer Buying Behavior Towards Online Shopping Stores in Malaysia. *International Journal of Academic Research in Business and Social Sciences*, 2 (1), pp. 393-403.
- Saylor.org (2013). Consumer Behavior: How People Make Buying Decisions: Available at: <http://www.saylor.org/site/wp-content/uploads/2013/02/BUS203-PoM-Ch3.pdf>
- Schumacker, R. E. & Lomax, R. G. (2004). *A Beginner's Guide to Structural Equation Modeling*: Second Edition. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Sharma, A. K. (2006). *Consumer Behavior*. New Delhi: Global Vision Publishing House.

- Shih, Y. Y. & Fang, K. (2004). The Use of A Decomposed Theory of Planned Behavior to Study Internet Banking in Taiwan. *Internet Research*, 14 (3), pp. 213-223.
- Syed, S. A. & Norjaya, M. Y. (2010). What Factors Influence Online Brand Trust: Evidence from Online Tickets Buyers in Malaysia. *Journal of Theoretical and Applied Electronic Commerce Research*, 5 (3), pp. 78-89.
- Tan, P. K., Heng, D., Yip, S. R., Tan, Y. Y. & Wong, S. B. (2010). Factors Influencing the Confidence Level of Malaysian Consumers Towards Electronic Commerce. *2010 International Conference on Business and Economics Research* (pp. 1-14). International Conference.
- Taylor, S. & Todd, P. A. (1995). Understanding Information Technology Usage: A Test of Competing Models. *Information Systems Research*, 6 (2), pp. 144-176.
- Thatcher, J. B., Loughry, M. L., Lim, J., & McKnight, D. H. (2007). Internet anxiety: An empirical study of the effects of personality, beliefs, and social support. *Information and Management*, 44 (4), pp. 353-363.
- The Star (2014, March). Health and Beauty Retailer Launches E-store: Available at <http://www.thestar.com.my/news/community/2014/03/25/convenience-at-the-click-of-a-mouse-health-and-beauty-retailer-launches-estore>
- Tseng, Y. F., Lee, T.-Z., Kao, S.C. and Wu, C. (2011). *An Extension of Trust and Privacy in the Initial Adoption of Online Shopping: An Empirical Study*. Information Society (i-Society), International Conference, 12172775, IEEE. Retrieved from <http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=5978529>
- Valentine, D. B. & Powers, T. L. (2013). Online Product Search and Purchase Behavior of Generation Y. *Atlantic Marketing Journal*, 2 (1), pp. 76-91.
- Wei, L. H., Osman, M. A., Zakaria, N. & Bo, T. (2010). Adoption of E-Commerce Online Shopping in Malaysia. *International Conference on E-Business Engineering* (pp. 140-143). IEEE Computer Society.
- Wells, C. S. & Wollack, J. A. (2003). An Instructor's Guide to Understanding Test Reliability. Testing & Evaluation Services. University of Wisconsin: Available at <http://testing.wisc.edu/Reliability.pdf>.
- Winch, G. & Joyce, P. (2006). Exploring the Dynamics of Building, and Losing, Consumer Trust in B2C e-Business. *International Journal of Retail & Distribution Management*, 34 (7), pp. 541-555.
- Wu, I. L. & Chen, J. L. (2005). An Extension of Trust and TAM Model with TPB in the Initial Adoption of On-line Tax: An Empirical Study. *International Journal of Human-Computer Studies*, 62 (6), pp. 784-808.
- Wu, W. Y., Lee, C. L., Fu, C. S. & Wang, H. C. (2014). How Can Online Store Layout Design and Atmosphere influence Consumer Shopping Intention on Website. *International Journal of Retail & Distribution Management*, 42 (1), pp. 4-24.
- Xie, G., Zhu, J., Lu, Q. & Xu, S. (2011). Influencing Factors of Consumer Intention towards Web Group Buying., (pp. 1397-1401). 12490104, Industrial Engineering and Engineering Management (IEEM). <http://dx.doi.org/10.1109/IEEM.2011.6118146>
- Yuliharsi, Ku Amir, K. D. & Md. Aminul, I. (2011). Factors that Influence Customers' Buying Intention on Shopping Online. *International Journal of Marketing Studies*, 3 (1), pp. 128-139.
- Zamri, N. B. & Idris, I. (2013). The Effects of Attitude, Social Influences and Perceived Behavioral Control on Intention to Purchase Online Shopping Apparels in Malaysia: Case Study on Zalora . *3rd International Conference on Management (3rd ICM 2013) Proceeding* (pp. 124-144). Penang: International Conference.
- Zhao, W. & Othman, M. N. (2011). Predicting and Explaining Complaint Intention and Behaviour of Malaysian Consumers: An Application of The Planned Behaviour Theory. *Advances in International Marketing*, 21, pp. 229-252.
- Zhou, L., Dai, L. & Zhang, D. (2007). Online Shopping Acceptance Model-A Critical Survey of Consumer Factors In Online Shopping. *Journal of Electronic Commerce Research*, 8 (1), pp. 41-62.
- Zhou, T. (2011). Understanding Online Community User Participation: A Social Influence Perspective. *Internet Research*, 21 (1), pp. 67-81.